

AMENDMENT OF SPECIFICATION:

Amend the first paragraph at page 1, lines 5-8, as follows:

The invention relates to the determination of the local oxygen turnover, the oxygen consumption, the oxygen content and the locally transported amount of oxygen in perfused tissues using an optical sensor ~~as set forth in the preamble to claim 1.~~

Amend the paragraph at page 13, lines 18-23, which describes Fig. 6, as follows:

Fig. 6 is a modified form of the ~~basie~~ basic sensor from Fig. 1, in such a way that in each separation a whole line consisting of at least 2 fibers was arranged in place of one fiber in each case. This sensor permits integrating measurements in larger areas. The depth selectivity of the sensor from Fig. 1 is virtually retained. Apparatus characterized in that the fibers of a separation (x_i) are evaluated in parallel.